

IN THE CLAIMS

This listing of claims replaces all prior versions, and listings, in this application.

1. (previously presented) A non allergenic, rising food flour, derived from the seed of a plant expressing in said seed a gene coding for the transglutaminase enzyme and one or more genes coding for wheat storage proteins, wherein said one or more wheat storage proteins comprise a preserved C-terminal motif LKVAQAQQLAAQLPAMCR (SEQ ID NO:11) and are selected from the group consisting of 1Bx7, 1By9, 1Dx5, 1Dy10, 1Ax2, 1Bx17, 1Ax1, 1Dy12, and HMW2 and are optionally modified by mutagenesis to eliminate allergenic amino acid sequences for food allergies to gluten, and wherein said plant is a cereal or a leguminosa provided that said plant is not wheat.

2. (previously presented) The food flour of Claim 1 wherein said one or more wheat storage proteins are modified by mutagenesis and the sequences to be modified are selected from the group consisting of PFPQPQLPY, PQPQLPYYPQ, PYPQPQLPY, LQLQPFPQPQLPY, QQGYYPTSPQQSG, QQGYYPTS, PFSQQQQQ, QSEQSQQPFQPQ, and QXPQQPQQF (SEQ ID NOS:36-44, respectively).

3. (previously presented) The food flour of Claim 2 wherein the mutagenesis is directed to amino acid in position 6 for PFPQPQLPY, amino acid in position 4 for PQPQLPYYPQ, amino acid in position 6 for PYPQPQLPY, amino acid in position 10 for LQLQPFPQPQLPY, amino acids in positions 5 and 8 for QQGYYPTSPQQSG, amino acids in positions 5 and 8 for QQGYYPTS, amino acids in positions 4, 5 and 7 for PFSQQQQQ, amino acids in positions 4 and 6 for QSEQSQQPFQPQ, or amino acid in position 4 for QXPQQPQQF (SEQ ID NOS:36-44, respectively).

4. (previously presented) The food flour of Claim 1 wherein the cereal plant is rice, soybean or corn.

5. (previously presented) A transgenic plant expressing in seed a gene coding for the transglutaminase enzyme and one or more gene coding for wheat storage proteins,

wherein said one or more wheat storage proteins comprise a preserved C-terminal motif LKVAQAQQLAAQLPAMCR (SEQ ID NO:11) and are selected from the group consisting of 1Bx7, 1By9, 1Dx5, 1Dy10, 1Ax2, 1Bx17, 1Ax1, 1Dy12, and HMW2 and are optionally modified by mutagenesis to eliminate allergenic amino acid sequences for food allergies to gluten, and wherein said plant is a cereal or a leguminosa provided that said plant is not wheat.

6. (previously presented) The plant of Claim 5 wherein said one or more wheat storage proteins are modified by mutagenesis and the sequences to be modified are selected from the group consisting of PFPQPQLPY, PQPQLPYPQ, PYPQPQLPY, LQLQPFPQPQLPY, QQGYYPTSPQQSG, QQGYYPTS, PFSQQQQQ, QSEQSQQPFQPQ, and QXPQQPQQF (SEQ ID NOS:36-44, respectively).

7. (previously presented) The plant of Claim 6 wherein the mutagenesis is directed to amino acid in position 6 for PFPQPQLPY, amino acid in position 4 for PQPQLPYPQ, amino acid in position 6 for PYPQPQLPY, amino acid in position 10 for LQLQPFPQPQLPY, amino acids in positions 5 and 8 for QQGYYPTSPQQSG, amino acids in positions 5 and 8 for QQGYYPTS, amino acids in positions 4, 5 and 7 for PFSQQQQQ, or amino acids in positions 4 and 6 for QSEQSQQPFQPQ, or amino acid in position 4 for QXPQQPQQF (SEQ ID NOS:36-44, respectively).

8. (previously presented) The plant of Claim 5, wherein said plant is rice, soybean or corn.

9. (previously presented) A seed produced by the plant of Claim 5 wherein said seed expresses the transglutaminase enzyme and one or more gene coding for wheat storage proteins, wherein said one or more wheat storage proteins comprise a preserved C-terminal motif of LKVAQAQQLAAQLPAMCR (SEQ ID NO:11) and are selected from the group consisting of 1Bx7, 1By9, 1Dx5, 1Dy10, 1Ax2, 1Bx17, 1Ax1, 1Dy12, and HMW2 and are optionally modified by mutagenesis to eliminate allergenic amino acid sequences for food allergies to gluten, and wherein said plant is a cereal or

a leguminosa provided that said plant is not wheat.

10. (previously presented) A process for the production of flour from the seeds of Claim 9, comprising the step of milling said seeds.

11. (previously presented) A process for producing a baked product comprising the steps of admixing the flour as defined in Claim 1 with a suitable amount of yeast, allowing said flour to raise and baking the obtained dough.

12. (previously presented) A baked product obtained by the process of Claim 11.